

## How to use the test strips and important notes:

#### Test Water:

Dip a strip into pool water for 2 seconds and then remove for best results.

Carefully shake off any excess fluid.

Compare against the color chart on the bottle (boxed colors = ideal range). Then take any necessary action to your pool water.

#### **Results:**

See next page for table.

#### **Best practices:**

Follow care instructions below to make sure these last. Follow instructions step by step. Read after 30 seconds. Do not leave for longer periods as the reagents turn a different color when drying (30 seconds is ideal).

## Test strips are very sensitive so please store them properly to ensure their long term accuracy by:

- Never removing the desiccant packet
- Keeping the strips away from light and moisture
- Keeping the cap on tight between each use
- Storing well sealed in a cool dry place (especially not in bathroom or by water source)

If you believe the test strips to be defective or they have all turned one color please contact us and we will help you fix the problem.



FIRST OF ALL, **thank you so much for choosing our pool & spa test strips**. We hope you get the results you were looking for and that this product and ebook gives you peace of mind about your pool!

As with many businesses, product reviews are very important for us in spreading the word about us and our products. If you have a minute we would love it if you could **please leave us a review on Amazon**. Thank you so much in advance for your support! – If you have any other questions or concerns, you can contact us at support@jnwdirect.com.

\*\*\*\*The information provided in this e book was compiled from various sources on the internet. The main source was a pdf by the American National Standard for water quality. The sources will be listed at the end if you want to do further reading.

This e-book will contain information about every aspect of the 7 tests, from what healthy levels should be, the issues that come with unhealthy levels and how to combat these issues to make your water healthier for you and your family. We hope you enjoy this information.

## **CONTENTS:**

- 1. How to use test strip kits & important notes
- 2. Quick glance, correct levels
- 3. Total Alkalinity, pH & Total Hardness
- 4. Bromine & Free Chlorine
- 5. Total Chlorine & Cyanuric Acid
- 6. General Pool Maintenance Schedule
- 7. Sources
- 8. Exclusive bonuses for you
- 9. Find us on...

## Correct Levels (according to epa, WHO & ANSI)

Test	Correct range (if applicable)	Max recommended (ppm)
Total Alkalinity	120 to 180	180
рН	7.2 to 7.8	7.8
Total Hardness	100 to 400	425 (pool)
		400 (spa)
Total Chlorine	-	-
Free Chlorine	1 to 4	4 (pool)
		5 (spa)
Bromine	3 to 6	4 (pool)
		6 (spa)
Cyanuric Acid	30 to 100	100

Please read on for information on every test.



## **Total Alkalinity:**

**Overall meaning** – Measure of the capacity of water to neutralize acids. Alkalinity in water will help keep the water's pH stabilized

**Dangers in water** – Your pool, spa or hot tub water being too alkaline (240+ on our bottle) means that the spa will naturally try and balance itself, causing a cloudy appearance and a build-up of scale which can form on the sides of the spa and on your plumbing. Not having the correct level of total alkalinity will mean that there will not be enough buffering and the pH can quickly spiral out of control.

#### Correct levels – 60 to 180 ppm

**How to fix and maintain** - There are two main chemicals available to lower alkalinity: sodium bisulfate, (also known as dry acid) and muriatic acid. You can read this article for further instructions.

### pH:

**Overall meaning** – pH is the scale of whether the water is acidic (1-6), neutral (7) or alkaline (8-14).

**Dangers in water** – A high pH or alkaline water can cause cloudiness and the build-up of scale as we mentioned in the previous section. A low pH can cause skin and especially eye irritation when you are in the water. Keeping pH in the correct range is essential for long term pool maintenance. Not doing this can also result in improper chlorine disinfection and concrete corrosion / pool staining.

#### Correct levels – 7.2 to 7.8

**How to fix and maintain** - To lower pH use sodium bisulfate, (also known as dry acid) or muriatic acid. You can read this article for further instructions. To raise pH you can use sodium carbonate.

## **Total Hardness:**

**Overall meaning** – Total hardness is the total of calcium and magnesium combined in the water.

**Dangers in water** – Low levels of hardness causes long term damage to your pool equipment, plumbing and surfaces. It causes serious damage to concrete and stone pools and spas. It is essential to keep within the correct range.

Having too hard water can mean your pool / spa will start to deposit scale and make water turn cloudy and unpleasant.

#### Correct levels - 100 to 400 ppm

**How to fix and maintain -** First, fix your pH and total alkalinity levels as they contribute to water hardness. To lower the total hardness, it is not an easy job. You can replace the water of your pool (as much as needed to balance the chemistry) after cleaning the pool. To raise the total hardness, add calcium chloride to the water.

## **Bromine:**

**Overall meaning** – Bromine is a chemical element (Br). In a pool or spa, bromine is an effective disinfectant and is commonly preferable in indoor pools.

**Dangers in water** – Like Chlorine, some people experienced irritated skin and eyes when water has been treated with bromine. High levels of bromine in the water may cause damage to pool surfaces and equipment. Direct contact with bromine liquid can cause severe rashes or blistered skin.

#### Correct levels – 3 to 6 ppm

**How to fix and maintain** - To lower bromine you can simply leave an outdoor pool or spa exposed to direct sunlight and it will naturally break down. You may also use neutralizing products containing sodium sulphite. Bromine comes in a tablet form and needs to be added to a floater to allow it to stay on the pool surface while it dissolves. Make sure the floater doesn't get into the skimmer.

## **Free Chlorine:**

**Overall meaning** – Chlorine is a chemical element that is often used in water to kill bacteria. It is represented by the symbol Cl. Free chlorine is the amount of chlorine that is active in the water.

**Dangers in water** – Having too little chlorine means your pool will be unsanitary, will develop algae and be unsafe for you to swim in. Having too much chlorine causes skin and eye irritation and since high chlorine levels lower the pH of the water, it becomes more acidic which is not good for the pool.

#### Correct levels – 1 to 4 ppm

**How to fix and maintain** - Using a treatment process called ion exchange will get rid of 97-99% of nitrate and nitrite in water. The same can be said for reverse osmosis water filtration systems.

## **Total Chlorine:**

**Overall meaning** – Chlorine is a chemical element that is often used in water to kill bacteria. It is represented by the symbol Cl. Your total chlorine is the amount of free chlorine plus combined chlorine.

**Dangers in water** – Having too little chlorine means your pool will be unsanitary, will develop algae and be unsafe for you to swim in. Having too much chlorine causes skin and eye irritation and since high chlorine levels lower the pH of the water, it becomes more acidic which is not good for the pool.

#### Correct levels – -

**How to fix and maintain -** To lower chlorine, the easiest way is to simply stop adding chlorine. Over time your pool will get back to normal levels. Another method is to replace some of the water which should balance the water. To increase chlorine simply add chlorine through chlorine tablets, liquid or powder shock.

## **Cyanuric Acid:**

**Overall meaning** – Cyanuric acid is commonly referred to as stabilizer, CYA or pool conditioner. It is a chemical compound that is used in outdoor pools to make chlorine last up to 5x longer in pools. It does this by preventing the chlorine from being broken down by the sun's UV rays.

**Dangers in water** – Having no / too little cyanuric acid in your pool means you will need to add a lot more chlorine to keep the pool crystal clear. Having too much cya will mean that the chlorine will lose its effectiveness so it will need to be lowered for the chlorine to work well again.

#### Correct levels – 30 to 100 ppm

**How to fix and maintain** - To lower cyanuric acid, you will have to refill/dilute part of your pool either manually or waiting for heavy rain. To increase cyanuric acid you add some either in powdered or tablet form.

## Pool / Spa Maintenance Schedule:

Keeping your pool or spa balanced, clean and healthy is extremely important for you and your family's health. It is important to maintain your water regularly and below we give you a rough guide of the steps you should take to achieve this.

Make sure your water is at the correct levels. Use our test strip kit to determine this and take the necessary action (steps listed above) to balance your water chemistry and disinfectants.

Once your water is correct you then need to maintain it. When your pool is in use it is vital to do a test 2-3 times per week making sure that the pH and free chlorine especially are correct. When not in use test once a week. You have to test your water more often when your pool has more people than usual, heavy rain or extreme temperatures, algae growth and if there is an odour coming from the pool.

Daily, whether in use or not you need to remove any leaves or other debris out of the pool. In swimming season, you need to clean all of the skimmer baskets.

Weekly you should clean the walls and floor using cleaners, brushes and vacuums. Make sure you cover all areas fully. Hose down the pool area after cleaning to make sure no dirt or slime gets into your newly cleaned pool.

## Sources:

\*We compiled this information as an overview of some of the meanings, dangers and solutions for the 5 tests to help you know more about your spa water. If you want to know more please do more research.

Thank you so much for reading, we hope you found this information helpful and if you would like to contact us for any reason regarding this e book or the test strips we provided, please email us: support@jnwdirect.com.

## Links:

poolforthought.com/lowering-pool-calcium-hardness

poolforthought.com/raising-pool-calcium-hardness

wikihow.com/Lower-Chlorine-in-a-Pool

lowes.com/projects/other-activities/swimming-poolmaintenance/project

standards.nsf.org/apps/group\_public/download.php/17496/ANSI-APSP11%20 2009-for-apsp-store.pdf

autopilot.com/what-is-cyanuric-acid-and-how-does-it-affect-my-swimming-po ol-water/

If you would like the large color chart associated with your test kit please contact me (Nathan) at support@jnwdirect.com, tell me the product you

bought and I will attach the correct large color chart for printing. If you have any other questions please just send me an email.

## **EXTRA BONUSES:**

#### **10% OFF YOUR NEXT PURCHASE OF ANY OF OUR TEST STRIP KITS:**



As an extra thank you, we are offering you a 10% coupon code to use for your next purchase of any of our highly rated and already well priced test strips.

Please use code: **GET10JNW** at checkout on Amazon.com.

#### BUY 2 OR MORE, GET 10% OFF:

We are currently running a promotion where you can buy 2 of any of our strip kits below and automatically get 10% off applied to checkout!

**PRODUCT VIP CLUB:** 

You are now already a member of our VIP program, where you will receive amazing coupon discount codes at our product launches and promotions (up to 70% off!). We will email you when we have a promotion worth sharing.

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